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Wildlife and Related Natural Resources

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JOHN N. DALTON, GOVERNOR

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Editorial

ENDANGERED?

On May 19 and 20 more than 150 professional biologists and interested laymen met at Blacksburg on the VPI&SU Campus to make up a recommended list of endangered plants and animals. Criteria were established for the categories of "Endangered," "Threatened" and of "Special Concern."

Such a job seems easy at first glance but there are many things which must be considered. First of all, many northern species barely extend into Northern Virginia, while for many southern species, Virginia is the northern limit of their range. Southwestern Virginia has many species native to the Mississippi drainage. Should these be classed as endangered in Virginia although common elsewhere?

In the case of birds there are migrant species to consider as well as residents. Some record sightings involve birds obviously very confused or blown off course by storms. On our coast almost all records of marine mammals represent animals in distress which beached themselves or strayed into inland waters.

Then there are reintroductions of species once extirpated from Virginia such as the elk and possibly the cougar. Occasional alligators are found in the

Dismal Swamp obviously contributed by discouraged pet owners. Should these be dignified by Endangered Status or ignored to take their chances? Also there are animals extending their range into Virginia such as the coyote and some nesting seabirds. Birds may be encouraged to extend their wintering range by artificial feeding.

There is also the problem of quality habitat. Should species doomed to extirpation in the state because their habitat has deteriorated past the point of restoration be protected coddled in a losing fight? Extinction is a natural process. Are we to fight to prevent it in all cases?

These are some of the problems the group wrestled with. The result will be a publication coming in about 6 months which discusses each species, its distribution and life history, its problems, and the classification assigned, along with the arguments for that classification. We hope to carry some of the highlights of that document in future issues of *Virginia Wildlife*. The problem of endangered species is not a simple one and the more facts available the more likely we will be able to make the right decisions to protect them without endangering our own way of life.—HLG

Letters

IN SEARCH OF...

I have just completed reading the May issue of *Virginia Wildlife* and wanted to compliment you on the article by Bill Cruey titled "Striper Supreme".

My own experience in this endeavor, while fishing the same waters as Mr. Cruey, has been less successful as I have found the stripers to be as illusive as a preacher in a massage parlor.

Roy Jarrett
Roanoke

Thanks for the praise! Many of our readers have indicated the same feelings. Good luck in your future treks in search of the stripers.—Ed. Asst.

THE COVER STORY

Where do you obtain your beautiful covers?

Chris Andersen
Richmond

The paintings and photographs used are chosen from many that are sent in to our office. Glad you like them!—Ed. Asst.

KILLING DOES - HUMANE?

Donnie Johnston ("Snowdrift Safari," January) must really be proud of himself for killing that doe. I know I must have had the chance to kill at least 25 during the '77 season. Thanks to hunters like Donnie, deer hunting may soon become a thing of the past.

James E. Cobbs
Howardsville

Does are deer too! They may not be much of a trophy but bucks and does are born in equal numbers and must be killed in equal numbers to maintain balance. How long would a cattle farmer last if he kept all his heifer calves and sold only bulls? I don't care much for shooting does either, but I don't condemn those who do. -Ed.

TRAPPING CONTROVERSY

I was heartsick when I read "Nancy Kissinger, Trapper." It amazes me that there are still attitudes like that of Mr. Bays and Nancy Kissinger. It does not take much intelligence to realize the physical and mental torture the trapper has inflicted on his innocent victim. Mr.

Bays obviously lacks sensitivity and respect for wildlife. He neglected to mention the large amount of wildlife and domestic animals, such as dogs and cats, which are permanently maimed and discarded by the trapper. Please bring your readers out of the "dark ages," and enlighten them with stimulating articles concerning wildlife conservation and protection.

Donna Lynn Zuendel
Richmond

The leghold trap seems a very benign instrument indeed when compared to the alternatives like the conibear. Dogs and innocent animals caught in these killer traps are not maimed - they are dead. They cannot be released with injured feet - they must be buried. In Virginia a trapper must visit his traps daily. If you know of cases where this is not being done, notify your Game Warden and he will make the arrest. Furs are a natural product of the land which can clothe us. Why should we waste this resource by not harvesting it and at the same time waste our precious fossil fuels in making substitutes and imitations? - Ed.

The Carolina Rig



A New-Old Way to Find those Cagey Bass

BY JAMES R. DONALD

Today's bass chasers keep telling each other, "The name of the game is finding fish." This finding game is aided by devices that measure the water's depth, temperature, oxygen and acidity--most everything having to do with fish comfort in the waters that surround them.

Many of us use one or more of these devices to good advantage. And there is no argument that catching can't be done without the finding--but we often overlook the fact that finding doesn't necessarily mean catching.

Many of us actually find bass but don't catch them because we fail to match the lure and its presentation to fish location.

Rather than just concentrating on finding - or catching - there is greater payoff in fitting all of the puzzle pieces together--fish location, type of lure and effective presentation.

The importance of putting it all together became clear to me in a largemouth bass fishing experience when I had spent more than a day in all depths of water trying to find and catch big bass. It hadn't been easy, but I finally found bass suspended in dense sunken tree brush some 5 or 6 feet below the surface. Their being there wasn't surprising since the heavy brush had a good supply of bait fish and the stained water offered protection from the sun's rays at a moderate depth, while the sure safety of deeper water structure was beneath the bass.

But my Texas rigged plastic worm with its 3/8 oz. slip sinker wasn't bringing them out of the brush. It was either sinking too fast to attract interest, or snagging badly in the brush as worm and lead headed in different directions.

In exasperation, I cut my line, removed the slip sinker and pinched on a single split shot 6 inches above a 3/0 hook embedded in the 7 $\frac{1}{4}$ -inch soft plastic worm. On the second cast into the brush, the worm slowly wriggled down several feet and was immediately grabbed by a 4-pound bass. The next cast produced a mate to the first fish. Seeing the action from a distance,

a lone fisherman moved closer. His first question: "What kind of rig is that?"

Since I hadn't yet named the rig, I held it up for examination. He thought it looked a little strange for bass fishing and opined it must be a bit difficult to cast. He was right on both counts...but I had the results to prove its merit.

The bass-catching solution turned out to be a variation of a rig that I had discarded several years earlier. The only difference was that with the former rig a hook with a weedguard was used, while the new rig was made weedless by sinking the hook's barb into the worm's body.

The triumph of pulling a number of large bass from those waters on that July day was especially noteworthy, both in the finding and catching departments. I had fished the previous day without finding fish. Too, a local bass club was holding a tournament, which I had not entered since I was relatively new to the reservoir and wanted to concentrate on big bass haunts.

Weather and water conditions for the tournament had not been bad. The July sun occasionally streaked through openings of partly clouded skies.

On the day after the tournament, I almost had the medium-sized Piedmont North Carolina reservoir to myself. I persisted in the places and tactics that had so miserably failed all of us the previous day...they just had to produce!

I headed up the main arm of the lake, where by trolling and watching the depth finder I had previously found several excellent points dropping into the old creek channel at 12 to 15 feet. There was other good fishable structure along the banks of and near bends in the creek in 15 to 20 feet of water.

By early afternoon, I managed to convince myself that the deep structure of the lake was devoid of bass, even very small ones. So, the next step was to move close to the shoreline and take some of the "easy" 12 to 13 inch fish that local fishermen had caught during their outing...but it seemed that even the small fish had turned contrary.

If the big bass weren't on deep structure and if they hadn't joined the yearlings along the shoreline, they

"The next two hours were some of the most exciting that I had spent in some 25 years of pursuing largemouth bass . . . I had laid to rest some preconceived notions about how to catch big bass."

had to be somewhere in between. I then realized that while I had fished the tips of the tree tops and trunks close to the bank, I had become discouraged with the snagging and hadn't thoroughly fished directly in the dense tree limbs of the giant trees that fish-conscious reservoir managers had cut into the water and anchored to the shore. Now that the big bass were "located," I thought to myself, how do I get them out? The top water lure proved difficult to cast into the maze of brush and it found no takers on top. The dependable Texas worm rig managed to catch only brush.

Certain that the process of elimination, rather than sound thinking, had finally helped me locate the yet unconfirmed fish, I still had the problem of how they were to be taken. A frantic tackle box search finally resulted in a late-blooming idea. The fish were probably several feet below the surface, waiting for some live-looking morsel to sink slowly down. An unweighted plastic worm seemed a natural enough bait for me. But the hook's barb had to be embedded in the worm to make it weedless and it needed at least one small split shot to help the worm make its way down through the brush.

The combination paid off! The next two hours were some of the most exciting and satisfying that I had spent in some 25 years of pursuing largemouth bass. I had finally located the fish and, most importantly, I had found the presentation that would double the 7 $\frac{1}{4}$ pound catch of the previous day's tournament winner. In the process, I had laid to rest some preconceived notions about where to find and how to catch big bass.

I match the rig to the depth of the fish, which is determined mainly by water conditions, such as color and temperature, and weather conditions like light and wind, along with the availability of structure and a nearby food supply. In each of the rigs, a No. 3/0 hook is embedded in the head of a 7 $\frac{1}{4}$ inch plastic worm in the same manner of the Texas style (where the hook is inserted in head of worm, pulled through one-fourth an inch below the head and the worm is slipped up hook's shank and then the hook is turned and the hook's point and barb buried in the worm's body). I use

a 14-pound test line which is tied directly to the hook, a bait-casting reel, and a 5 $\frac{1}{2}$ foot graphite rod. This combination usually gives me enough backbone to rather quickly get fish away from or out of structure.

The amount of lead added to the rig, if any, normally depends on the depth of the fish. Actually, if bass are in 4 or 5 feet of water or less, I use the weedless plastic worm described above with no weight at all. I toss it onto shoreline pads and gently pull it along, letting the worm fall in pockets, or cast it to fallen trees and stumps in shallow water along the shoreline, using the same procedure.

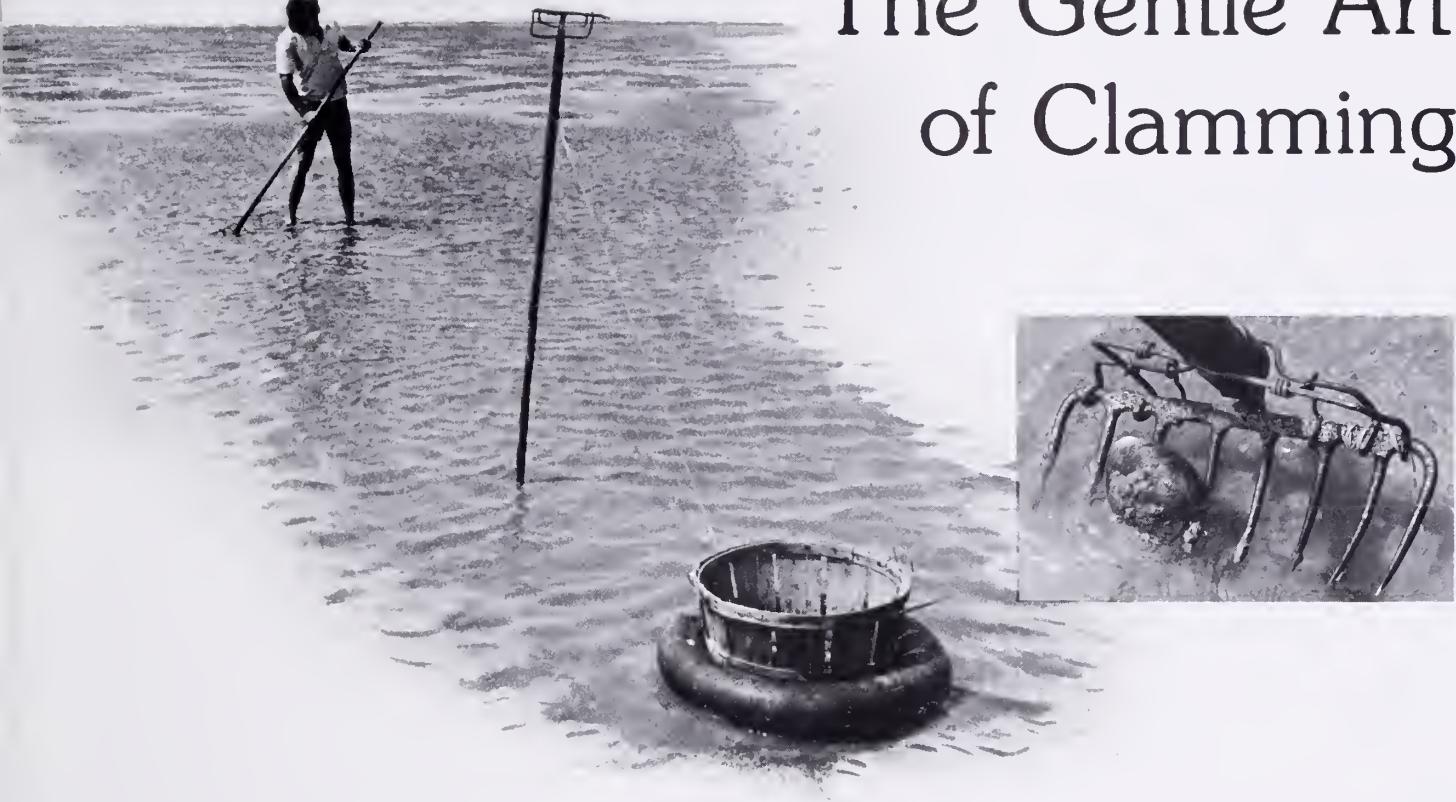
For fish at depths of 5 to 10 feet, as related earlier in the North Carolina experience, a single No. 3/0 round split shot is clamped to the line 6 inches above the worm's head. The slight additional weight adds to sinking ability, helping prevent the worm from floating to rest on this brush.

For water of 10-15 feet, I modify the rig a little further, adding a second split shot about an inch above the first. This speeds up sinking speed a bit more. Yet, I find the rig sinks slowly enough to attract attention on the way down, "straining" the water from top to bottom. Once down, it has good visibility, offering the realistic appearance of the floating-free swimming worm several inches above the lake's bottom or underwater structure, particularly if it is along a migration route.

In casting to structure at depths of over 15 feet, I usually find the fish are near this deep structure and further modify the rig to get down faster. Here I go back to a 3/8 oz. sliding sinker, but move it 6 inches above the line and clamp a split shot below the sliding lead. I also use this version at lesser depths on windy days or in swifter waters.

Take a look in your tackle box. If you don't find a box of split lead shot, reserve a spot and fill it before you next venture out to a favorite fishing hole. If you insist on using a sliding sinker, move it 6 inches up the line and clamp that lead shot below it because that plastic worm will work better if you give it some performing room. Get your lead up, if not off!

The Gentle Art of Clamming



BY CURTIS J. BADGER

Whoever the guy was who ate the first clam had to be one of the smartest fellows in the prehistoric world - or at least one of the hungriest.

It never ceases to amaze me how certain items of seafood, particularly such items as clams and oysters, made their way to the list of gastronomic edibles. How did the first person to eat an oyster recognize that the sharp, homely clusters of shells growing along a muddy bank contain succulent little organisms? But at least the oysters were in full view when the tide was out, and it could be reasoned that they caught the eye of some curious passing hominid who had been dining on nothing but sassafras root for two weeks.

But clams! For beginners, they hide under several inches of slimy mud or sand, and even at low tide they are invisible to unknowing scavengers. Once they are found, their rough, hard shells are nearly impossible to penetrate, and they look anything but appetizing. So how was it that some wandering tribesman even managed to find the clam, much less determine that it is good to eat? Add that to your list of life's imponderable phenomena.

You can develop your own theory on the anthropological importance of the bivalve, but one thing is certain, the folks who lived in Virginia's coastal areas before the white guys elbowed in had a deep appreciation for local shellfish. Archaeologists who have unearthed Indian villages in the Tidewater area have invariably found mounds of oyster and clam shells, giving testimony to the coastal tribes' affinity for shellfish.

And over the centuries things haven't changed much. The clam is still a favorite of local seafood lovers, and even the method of gathering them has changed little since the days of the Indians. The methods are unsophisticated but productive, and clamming is one of the few outdoor sports that has not generated much Madison Avenue commercial attention. Clamming is definitely not for the equipment conscious sportsman. You won't find special hand-made, Icelandic clamming shoes listed in L.L. Bean's. Nor does Orvis market a line of super sensitive, graphite handled clamming rakes.

Clamming can be broken down into three distinct methodologies, each having its rather pious group of followers. There are the treaders, the rakers, and the signers.

The treaders, as their name implies, locate clams by the guile of their talented bare feet. Closely related to the folks who

crush grapes to make wine, treaders rely on the rapid up and down motion of their feet to locate clams buried in the soft bottom. When they step on a clam, they reach down, free it from the bottom, and continue their stomping pattern.

The method is efficient and certainly inexpensive, but it is obviously not for persons with tender feet. As far as I'm concerned, treading was great for the Indians; they didn't have tab tops and broken beer bottles to contend with. Personally, I like to be able to see what my feet are treading on, and in knee-deep muddy water visibility is zilch.

I must admit to being an avid raker. It's hard work, but the rewards are worth the effort. My equipment consists of an ancient clam rake, the handle of which was shaped by my grandfather from a cedar sapling, a pair of sneakers which are refugees from the tennis courts, and a bushel basket fitted snugly inside an old tire inner tube. The tube keeps the basket of clams afloat, and a small piece of nylon cord attaches the float to the belt loop of my cutoff jeans. With this rig I can wander all over the mudflats, raking clams at leisure and depositing them neatly in the floating basket.

There's a fellow who lives down the street named Pete Rew who is an avid

clam raker, and although he's in his mid-seventies and has had two heart attacks and two major operations recently, he had rather rake clams than do most anything. For Pete, fishing is a bore compared to clamming. "There's nothing like the thrill of pulling the rake through the mud and hearing the solid scrape of a clam," says Pete. "It beats catching a fish any day."

Pete is more than twice my age, but he can fill a basket of clams every bit as quickly as I can.

Although treading and raking are usually done in the tidal flats in shallow water, signing is done on mud or sand bars that become completely uncovered when the tide goes out, or in very shallow clear water where the bottom can be seen easily.

Signing clams is an exacting science that takes years of experience to perfect. In at least one case I am familiar with, my own, I don't think the science will ever be perfected.

The theory goes like this: the clams bury themselves beneath the bottom and extend a siphon upward to inhale seawater which contains microscopic bits of nutrients. At the point where the siphon breaks the surface of the bottom is a small hole, usually shaped like a keyhole. The hole, or sign, allegedly means a clam is lurking just under the surface and can be readily extracted by hand or by a small, rake-like pick.

The theory works: I've seen good signers pick up a couple hundred clams in an hour or so. But as for me, every time I find a hole in the mud, it turns out to be just that - a hole in the mud. Perhaps some day someone will let me in on the secret of signing.

Regardless of your clamming technique, the objective always remains the same: to get those tasty morsels on the dining room table in the form of chowder, fritters, casseroles, or in whatever medium your imagination can come up with.

Virginia's coastal areas are noted for their outstanding seafood cooks, and here are a few recipes you can add to your cookbook:

"REGARDLESS OF THE TECHNIQUE, THE OBJECTIVE IS THE SAME: TO GET THOSE TASTY MORSELS ON THE TABLE."

DEVILED CLAMS

1 egg
3 tbsp. evaporated milk
1 cup bread crumbs
1 small onion, chopped
dash of parsley flakes
1 tsp. Worcestershire sauce
2 tbsp. melted butter
1/4 med. green pepper
dash of tabasco sauce
1/2 tsp. prepared mustard
1 cup chopped clams.

Mix all the above ingredients, and bake in a buttered pie plate for about 30 minutes at 400 degrees, or wash large clam shells and fill with mixture, bake for 20 minutes at 400 degrees.

CLAM SPAGHETTI

CLAM FRITTERS

1 pint clams (chopped)
1tsp. salt
1/2 tsp. pepper
1 large egg
Mix in above:
1/2 cup flour
1 1/2 tsp. baking powder
1/2 tsp. soda
2 T. instant dry milk (optional)
1 medium onion - chopped

Mix all ingredients well. Have one inch of shortening or oil in fry pan. Drop 2 T. in each fritter. Fry until golden brown on one side, turn over and fry on other side. Drain on paper towels.

SCALLOPED CLAMS

1/2 cup butter or margarine
1/2 cup toasted bread crumbs (2 slices)
1 cup cracker crumbs (18-20 saltines)
Salt and pepper - 1 tsp. MSG
2 cups shucked clams (minced - blender)
2 T. minced onion
2 T. minced parsley (optional)
3 T. condensed milk, or half-and-half
2 tsp. Worcestershire sauce

Pre-heat oven to 375 degrees. Melt butter, add bread and cracker crumbs, salt and pepper and mix. Reserve 1/3 for topping. Mix remainder with clams, onions and parsley. Pour into well greased (8 x 8) baking dish. Dot with butter and sprinkle milk and reserved crumbs over top. Bake uncovered 20-25 minutes.

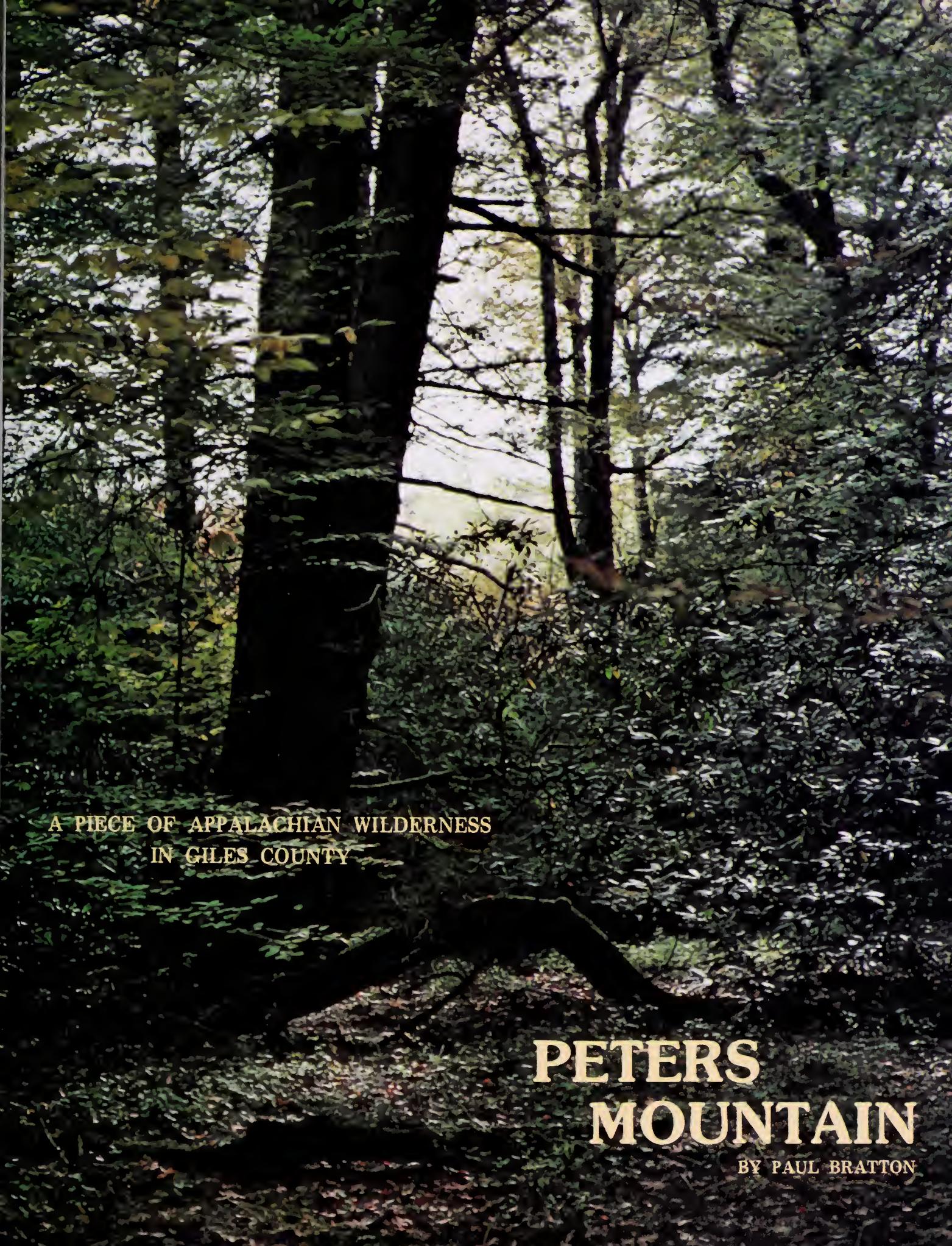
2 doz. large-medium clams
(shucked out about a quart)
1 stick butter or margarine
3 medium cloves or garlic
(pressed or firmly chopped)
salt and pepper to taste
1 tsp. MSG
1 cup clam juice
1/2 lb. No. 10 Vermicelli spaghetti

Put clams through food chopper-medium blade or dice or use your blender. Bring to boil in liquor. Drain, saving liquor. Melt butter in top of double boiler, add garlic, salt and MSG and drained clams. Cook spaghetti, drain and add to butter sauce. Keep warm until serving. A salad and hot garlic bread round out a real seafood treat.

CLAM CHOWDER

4 slices bacon
1 large onion
6 potatoes
2 stalks celery
clam liquor (opt.)
2 cups clams
1 qt. tomatoes
1 tsp. thyme
1 T. parsley
1 tsp. salt
1/4 tsp. pepper

Dice bacon and saute. Add chopped onions. Cook until tender. Add chopped potatoes and chopped celery. Cover with clam liquor or water. Cook 15 minutes or until tender. Add chopped clams. Put quart of tomatoes in blender and add to pot with seasonings. Simmer 15 minutes. Serves 6.



A PIECE OF APPALACHIAN WILDERNESS
IN GILES COUNTY

PETERS MOUNTAIN

BY PAUL BRATTON



Bracket fungus is a common sight on decaying trees.

protect it from the civilization it spawned. The Peters Mountain Wilderness Study Area in the Jefferson National Forest is an attempt to protect a small piece of the Appalachian wilderness.

Lying just west of Virginia's interior, this 6,700 acre tract covers the eastern slope of Peters Mountain between Stony Creek and the West Virginia boundary at the top of Peters Mountain. The area can be entered from State Route 635, where a Forest Service sign points to the Appalachian Trail and Peters Mountain.

For about one-half mile east of the sign, Stony Creek forms the lower boundary of the wilderness study area. The Commission of Game and Inland Fisheries stocks this stream with rainbow, brown, and brook trout. Above the creek, the Appalachian Trail winds eastward on its circuitous journey to Maine, through oaks, pine and a few scattered American holly bushes.

Pine Swamp Branch Shelter is located on the Appalachian Trail a short hike north of the road. The stone trail shelter has a small fireplace in its back wall, providing light and warmth on long, cool autumn evenings. Above the rhododendron-lined banks of Pine Swamp Branch surrounded by hardwoods, a camper awakens to the sun rising over White Rock Mountain.

North of the shelter, the trail becomes steeper as it ascends the rocky slope above Pine Swamp Branch along the stream. The narrow hollow contains many cove hardwoods intermixed with rhododendron and eastern hemlocks.

Tulip trees, cucumber magnolia, basswood and black birch are typical of Appalachian coves. Here they are found with an understory of mountain maple and moosewood. Several bigtooth aspen thrive in this hollow and, as the hiker climbs higher, the yellow birch replace the black birch in the tree community.

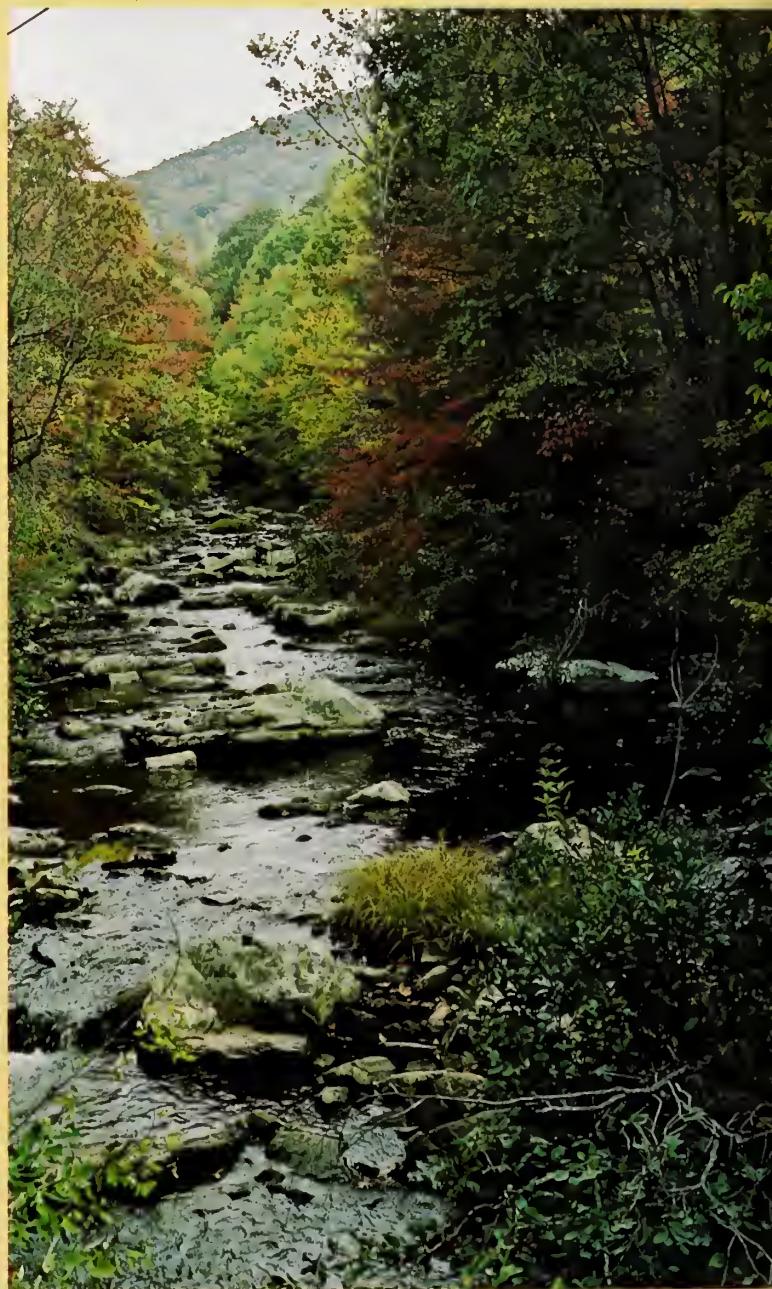
Spring wildflowers are common and varied among these Appalachian hardwoods, but, in the autumn as the leaves of the moosewood turn a translucent gold, a less conspicuous plant is sought. The Cherokee called it the mountain climber, though it is better known today as ginseng. Ginseng's range once covered much of eastern North America, but the clearing of the virgin forests

and the high value of the root has reduced its habitat to these Appalachian hollows where man is but a visitor.

Pine Swamp Branch is named for and fed by a boggy area just below the top of Peters Mountain. The first sign of the bog is a rusty tint in the stream where the trail levels off as large oaks and chestnut saplings take the place of the cove hardwoods. The coloration is from decaying vegetation in the bog. In the far north, rivers are often stained a tea color where bogs are common, but bogs are too small and rare to impart much color to the clear mountain streams of the southern Appalachians.

Cinnamon ferns create miniature forests in the bog, reminiscent of the time when these mountains were formed and the tree ferns and their allies dominated the

A quiet mountain stream can offer an escape from the stress of modern life.



swamp forests. Dense thickets of rhododendron are woven with the pockets of sphagnum moss and large virgin hemlocks are found in drier spots. In autumn the strange blossoms of witch hazel dot the bog, their twisted yellow rays complimenting the changing leaves.

The round-leaved sundew is common in bogs as far north as Alaska and has been found in this bog on Peters Mountain. It produces a small flower in mid-summer, but the leaves are the most interesting part of this plant. The hairs on the sundew leaves glisten with droplets of a sticky substance that attracts and holds small insects. The leaf curls around the victim and devours it, reversing the usual order of insects eating plants.

Tracks of many forest animals can be found in the damp ground around the bog, from the common white-tailed deer to the nocturnal raccoon. The Peters Mountain area is considered a good black bear habitat and this impressionable ground is a good place to look for tracks of the wary bear. A track or clawed tree is all the black bear is likely to reveal.

After reaching the bog on its two-mile climb from the highway, the Appalachian Trail turns to the southwest and follows the ridge of Peters Mountain. On the dry ridge where the chestnut once thrived, oaks and hickories comprise the forest canopy, the chestnuts reduced to scattered saplings by the blight. Ruffed grouse often thunder off through the forest, seemingly without regard for branches in their path.

The backbone of the mountain is visible in outcroppings of sandstone covered by hanging ferns and saxifrages. As the trail descends to Dickenson Gap, it is studded with huge rectangular sandstone slabs, a natural stonehenge encrusted with rock tripe lichens. A

three-foot upright stone in Dickenson Gap marks a side trail, blazed with blue paint to distinguish it from the white blazes of the Appalachian Trail.

The Peters Mountain Wilderness study area is an attempt to protect a small piece of Appalachian wilderness

The Appalachian Trail continues along the ridge out of the study area and descends to the New River. A hiker can follow the side trail one-and-a-half miles down to small streams that flow into Stony Creek at Route 635, two miles from the entrance into the study area. This eight-mile hike can be easily made in a day, or a longer hike can involve continuing along the ridge out of the study area.

All animals have an effect on their environment. Deer prune the shrubs and keep trails open along the ridges, squirrels plant the nuts that become the walnut and hickory trees and beavers construct dams creating ponds and meadows. Man as the dominant species has had the greatest effect on the natural world. The Indians opened up the Appalachian valleys with fires, but it was the white man's civilization that transformed the virgin forest.

A commercial use has been found for virtually every tree of the Appalachian forest, reducing the life expectancy of the average tree to a few decades when it reaches adolescence and is cut. Native wood is well suited to the Appalachian house. There is no reason to send to California for redwood with the variety of local wood available.

The best use of the pine and the tulip tree is not always computed in boardfeet; some trees should be left to fulfill their life span, spreading their boughs over older forests where man can come and see the natural world as more than his private domain. There the pileated woodpecker can sing his wild song and the ginseng mature its bitter root.





CANADA GEESE



WHISTLING SWANS



REDHEAD

MALLARDS



HEN WOOD DUCK



THE ART OF KATHERINE ROBERTSON

BY SANDY COLEMAN

Katherine Robertson, a relative newcomer to the ever-growing ranks of wildlife artists, manages with a few deft strokes of her brush to capture all of the magic and mystery of waterfowl.

Robertson's work, ranging in medium from the delicacy of watercolor to the rough precision of scratchboard, depicts Virginia's native waterfowl in a manner that is uniquely hers. The hazy and undefined background brings into prominence the ducks and geese portrayed. She brings to her work an undeniably elusive quality of lightness and movement.

Robertson, who says that her art seems to appeal primarily to women, attributes this to the fact that her work bears some similarity to the Impressionist Movement in 19th Century France exemplified by such artists as Renoir and Degas.

Raised in North Miami, Florida, then a small rural town, Robertson developed an early interest in wildlife and waterfowl, in particular. She often accompanied her grandfather, an avid quail shooter on his treks around Florida's Lake Ochachobee. This was further enhanced by her development as a dove and waterfowl hunter. Additionally, Robertson describes herself as a "fair skeet shot."



An interest in the work and activities of Ducks Unlimited occupies a great deal of Katherine Robertson's time and artistic skills -- she regularly donates paintings for auction at DU fund-raising programs.

Robertson and her husband count themselves as devoted collectors of other wildlife artists' work, originals and prints make up their collection.

The samples here illustrate admirably why interest in her painting is growing. Through her art, even city-dwelling Virginians can bring the world of wildlife into their living rooms.



LIVE BAIT

BY JOHN TRAISTER

Nothing can beat the thrill of a large bass busting out of the water to take a well-maneuvered surface lure or when a bluegill kind of sucks in a dry fly or popper. Few of us, however, would spend a day of serious fishing without at least thinking of live bait. My own practice, for example, is to use surface lures in the early morning and evening, and then switch to live bait--fished on or near the bottom--during the hours in between. In fact, what little time I do have to fish anymore, I want a good assortment of lures and bait to insure results during the day.

With all of this live bait collected, the next problem is to keep it alive until you need it. If you're an apartment dweller, then there's not too much you can do about storing live bait with the exception of perhaps talking the landlord into letting you put a small wooden box of nightcrawlers in the building's utility room or keeping a dozen or so water-dwelling creatures in the family aquarium. On the other hand, if you have a garage or basement, a year's supply of bait can be kept on hand at all times.

For minnows, madtoms, and similar baits, the best housing I know of is one of the old type soda pop coolers that utilizes water for cooling. If fed properly and the thermostat is kept at between 45 and 55 degrees, minnows can live in this device indefinitely. Crayfish will do just as well.

If you can't find one of these soda pop coolers, the next best choice would be to cut a 55-gallon drum in half (lengthwise), support it solidly so the now flat side is up, fill it with water, and buy one of the small electric water air pumps. If you don't let the water get too warm, this method will work very well--especially for madtoms.

Those of you who are fortunate enough to live next to a cool stream can construct a minnow box which resembles an old trunk with a wire or screen bottom and sides through which the water will pass. Many people keep minnows alive the year round without feeding them as they obtain food from the flowing water and the creek bottom.

Nightcrawlers can be kept a long time by placing a small amount of soil, used coffee grounds, and the nightcrawlers in a paper coffee cup and storing them in the refrigerator. For hellgrammites, use damp moss or river grass in place of the soil. One fisherman kept over 500 nightcrawlers in an old wooden nail keg which was partially buried in the ground. A small one-inch diameter hole was bored in the bottom and a piece of screen tacked over it to allow water to run out and to keep the nightcrawlers in. This setup worked very nicely and

NATURAL BAIT

Grey Crickets



Caterpillars

Earthworms

Freshwater
Shrimp

allowed the fisherman to keep nightcrawlers the year round without too much bother.

With the prices of live bait jumping just like everything else, a few dollars invested in keeping a year's supply of live bait on hand at all times would be well worth the price for persons who fish frequently.

With a little planning, anyone can find and keep enough live bait on hand to provide sufficient bait the year round. To illustrate, during the spring season--from April to June--you will seldom have to worry about finding live bait almost anywhere. You can find all the nightcrawlers you need by turning over stones along the stream or river banks, hellgrammites are plentiful under stones in or near the water line, and crayfish can be found under flat stones in the many creeks that feed the major rivers in the state. You can even catch creek minnows with an ultra-small hook with a small piece of worm or bread in these creeks. In fact, about the only times that one needs to buy live bait during this period is when your time prevents you from looking for bait. Then the purchasing of about two dozen minnows and the same amount of nightcrawlers should suffice for two fishermen.

If you want to collect large amounts of live bait during this productive spring season for storage, there are several different methods. Following behind plows when you or your neighbors are having the garden plowed will produce many nightcrawlers; catching them at night on your lawn with the use of flashlight and a quick hand is a sport in itself.

Hellgrammites can be caught in early spring by turning over rocks near the water's edge and then later in the season, they can be found under rocks in the rivers. To collect them, take along a partner and one of you hold a seine in shallow water facing upstream while the other goes upstream a few feet and kicks up rocks. You may also catch a few madtoms by using this method.

Catching crayfish by turning over flat stones in creeks can be fun as the little creatures dart backward--usually following the cloud of silt caused by the overturned rock. This, of course, is when you have plenty of time. You'd probably prefer to tie pieces of meat (worms, etc.) inside a funnel minnow trap and leave it in the creek a couple of days.

Conservationgram



LAKE ANNA FISH OK'D BY HEALTH DEPARTMENT. Dr. Robert S. Jackson, Assistant State Health Commissioner and Director, Office of Health Protection and Environmental Management, has issued an assessment of heavy metals in Lake Anna fish. In view of some recent publicity surrounding the Contrary Creek Research Project, Dr. Jackson said that, "there is at present no evidence of a health hazard in any fish from Lake Anna.

"An analysis by a U.V.A. graduate student had revealed a level of certain contaminants in some fish (from Lake Anna) which was later checked out by the State Water Control Board in their monitoring program and could NOT be confirmed. The State Water Control Board has been conducting an ongoing monitoring program of Contrary Creek and Lake Anna for several years. Further testing has failed to identify any public health hazard involved in the catching or the consumption of fish from Lake Anna.

VIRGINIA GROUSE POPULATIONS IMPROVING. Grouse numbers in Virginia seem to be climbing again after a couple of lean years at the bottom of their cycle, reports Game Commission Research Biologist Joe Coggin. The number of birds flushed per hour increased from .72 in the 1976-77 season to .9 last season, Coggin said. In addition the percentage of juveniles in the bag jumped from 26% to 46.3%.

The comparison figures are supplied by a network of volunteer cooperators who hunt in Virginia's mountains. Hunters averaged 6.9 hunting days during the season and bagged 3.2 birds. Snow was reported falling or on the ground during 9% of the hunting days. Dogs were used by 81% of the hunters supplying reports.

The survey is a cooperative project of the Ruffed Grouse Society of America, the Virginia Commission of Game and Inland Fisheries and other Virginia grouse hunters. Data has been collected under the project since the 1973-74 hunting season.

BACK BAY CREEL SURVEY CONTINUES. Mitchell Norman, Game Commission Regional Supervising Fish Biologist, reports that "the results of an ongoing creel survey on Back Bay shows a startling increase in fishing pressure and harvest compared with the results of a similar study which was conducted from 1959 through 1962. The estimated fishing pressure for April and May of 1978 indicated a total of 14,239 Angler Visits were made to Back Bay. This total, for just two months, was greater than the average annual fishing pressure during April--October survey periods from 1959 through 1962, which was 12,300 Angler Visits."

For this same two-month long period (April and May 1978) an estimated 105,000 fish were harvested compared to an average annual harvest of 29,120 fish for the period 1959 through 1962. Norman explained that "the primary explanation for this increase in the Back Bay fish harvest appears to be a 'virtual explosion' in the black crappie population. During the early sixties, crappies were uncommon in the bay and very few were caught by anglers. The average annual harvest from 1959 through 1962 was less than 1,000 crappie." Now crappies are very abundant in the bay and offer excellent Spring fishing around the numerous duck blinds and house pilings. During April and May 1978 anglers captured an estimated 77,717 crappie which averaged 0.6 lbs. in weight.

U.S. FOREST SERVICE ISSUING CUTTING PERMITS. Jefferson National Forest Supervisor, M.J. Penfold, has suggested that "persons interested in cutting their own firewood for the coming winter consider doing so this summer." Permission to cut wood on the National Forest must be obtained prior to doing any cutting, according to existing regulations. Contact District Offices for permits.

WILD FOOD FIASCO

BY BILL THOMAS

I have been teaching wild food identification classes at Northern Virginia Community College for five years. I offered these classes in the Spring, Summer and Fall on weeknights and conducted Saturday and Sunday field walks. This past summer, I decided to try something different and taught a wild foods weekend in the Shenandoah Valley of Virginia. I rented a cabin near the small village of Toms Brook for a weekend and combined this trip with an extra three days of wild food survival at Shenandoah River Outfitters in Luray.

In the middle of July, I held an evening orientation on wild food identification and planned for the weekend. We left for Toms Brook the following Saturday morning at 8:00 A.M. Our caravan of five cars and sixteen people drove the ninety miles and arrived at the small red A-frame cabin anticipating an exciting and rewarding weekend. Little did we know of the troubles that awaited us. We immediately took an hour walk to get the feel of the land. On the property we found apple and plum trees, burdock, ground ivy, some dried up red raspberries and a rabbit. Three hundred yards down the road towards the river was a dilapidated red barn. In this area were some stalks of lambsquarters, pokeweed and catnip. On a steep, dry hillside, we started foraging prickly pear cactus. I have eaten well over one hundred wild foods, but never cactus. Eager to show my students that it is edible, I started picking. Two students pitched in to help. A few minutes later, two others that had picked cactus in the West warned us to be careful of the spines, but the first of several disasters had already occurred. Our hands were covered with little brown spines. Henry had some on his face and we were all in pain. There are wild medicinal cures for almost any problem except this one. The cool water of the Shenandoah River offered a temporary relief at least.

I had instructed the students to bring their final lunch with them from home (hinting it could be their last if they weren't successful foragers). We returned to the cabin and finished every crumb of it and then began a hike in ninety-five degree heat. The cabin was located in the fifth bend of the Seven Bends Area of the North Fork of the Shenandoah River. Above us were three ridges of the Green Mountain Range of the Massanutans. I decided because of this terrain to take a compass reading so we wouldn't get lost. The fields were parched because of a lack of any appreciable rainfall for six weeks. For the first time in my life, I saw that great American plant, poison ivy, wilted. Foraging did not look too promising. Our collecting bags were empty for

half an hour until we found some pokeweed. We could only pick the tips, as the mature plant is a strong poisonous emetic. We headed to the river and found little else to forage when ahead of us was Susan sitting down in the water, clothes and all. Several of us followed her and waded in.

Refreshed and with restored confidence, we hiked downstream. Along the banks was a paw paw patch with a hillside of red raspberries. With open plastic bags, we ran to the trees to find the unripened paw paw fruits as hard as rocks. The other students reported the raspberries had dried up before they ripened. Heading to higher ground we almost stepped on the dried carcass of a week old fawn that had fared a lot worse than we. Our spirits hit a new low when a large blackberry patch on top of the hill yielded only a pint of berries. I had hoped that by this time of the day to have full collecting bags. We moved down by the river again and passed poisonous water hemlock when some students saw a plant that looked like Queen Anne's Lace or Wild Carrot. They dug up the large succulent looking root and examined the divided leaves and umbrella like flower. I informed them this was the notorious plant that killed Socrates - poison hemlock. Our bags remained nearly empty.

I organized the students into groups to pick and prepare the wild foods near the cabin and barn. We had burdock root diggers, apple pickers, plum tree shakers, ground ivy and lambs-quarters harvesters, mussel and clam cleaners, and apple corers. We completed our tasks and with the apples cooking most of us headed for the Shenandoah to cool off. We didn't jump or dive in as the water was only two feet deep, but we crawled, waddled, waded or just sat and cooled off. Shirley picked another thirty-five clams to add to our dinner. Our menu that night was mashed burdock roots with butter, poke greens, prickly pear cactus leaves, mussel and clam stew (with lambs-quarters, wild carrot root, amaranth and thistle), and a small wild salad of day lily tubers, sourgrass, and violet leaves. Our beverage was wild bergamont tea, with applesause and plums for dessert. We saved the catnip tea for a nightcap. Everyone found something they liked and several stuffed themselves. That night the students were treated to a star gazing program given by Libby McCourt and Sandy Hemmingway, students that were also volunteers for the Fairfax County Park Authority. The program and the delicious meal made the evening an enjoyable one.

The next morning, I decided some wild meat would be exactly what we needed for breakfast. I intended to

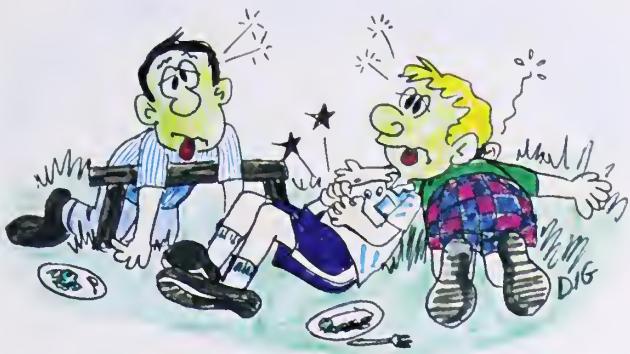


Illustration by Diane Grant

set a deadfall trap but its use was overruled by the students as they weren't willing to kill one rabbit and share it between them. The Shenandoah River has a beautiful wide south fork closed to fishing because of Mercury poisoning and narrow north fork that is open and safe. I took two students with me to the north fork to catch enough fish to feed my fifteen hungry students. Between 6:30 and 8:00 A.M., we caught six fish - three bluegills, a bass, a catfish, and a river chub. They were all so small that together I didn't think they could feed three people let alone fifteen, so I tossed them back in. Breakfast would have to be minus the meat after all. The others had awakened and put plum cobbler in the oven and pancakes on the stove. We didn't exactly starve for breakfast with a menu of pancakes with blackberry syrup, plum cobbler, sassafras and ground ivy teas.

At 9:30 A.M., we left for a look at mountain wild foods. I planned to climb one of the three ridges. Even though the mountain was shaded from the hot sun, the group wasn't too enthusiastic about climbing it. There weren't any paths and it was almost free of ground vegetation. After a hundred almost vertical yards, we crossed to a steep ravine and found it impassable. The whole mountain looked uninviting. This class would have to do without mountain wild foods, too, I decided. After this setback, I headed for the river. With our spirits still high we began crossing. Off came the shoes, up went the pantlegs, and in the arms were plastic collecting bags, cameras and purses. All sixteen of us were in the water forming the wildest looking parade in the forest. Miraculously no one fell in.

With the partial failures beginning to mount, I couldn't believe that the students were not discouraged. Evidently they signed up to learn about wild foods and enjoy themselves and weren't going to be stopped by a few problems. The worst was yet to come, though. We began walking across a pasture bordered by unripened paw paw trees and the river with a herd of

black angus cows. They decided they wanted to stay on the same shady path that we wanted to travel on. Luckily we had a few courageous souls that shooed them away. We walked to a pond and again discovered wilted plants and parched land. By then the temperature was one hundred degrees and we had been in the sun for three hours. All we had harvested was a few day lily tubers, lambsquarters greens, and broad leaved dock. Maybe we should have eaten the cows. With little to show for our journey, we were tired, hot and now lost. I forgot to take a compass reading and the meandering river offered little guidance. I knew we would find the road if we kept on walking. It took us another hour to find our way back to the cabin.

It was now 1:00 P.M., so one carload with other commitments at home had to leave immediately, even though they were hungry. They never did realize how lucky they were not to wait for lunch. The rest of us prepared and ate left over mussel and clam stew with dumplings, applesause, broad leaved dock and lambsquarters greens, and a day lily tuber salad. We drank Sassafras and ground ivy teas.

Then the fun began. Several students began feeling nauseated. Susan was the first to turn green, clasp her hand over her mouth and run for the balcony railing, with Sandy not far behind. Libby and Teresa informed us that they had done the same the night before. Confused as to the reason for their plight, some of us attributed it to heat exhaustion, so we took a cool dip in the river. After sitting in the water awhile, Naomi got up and walked away and it was her turn. Only four of us were left. Mike decided there wasn't any reason in waiting for the awful nauseating feeling so he stuck his finger down his throat and cleaned out his stomach. With me sitting in the cool water they all finally departed wondering why they were sick and their instructor so comfortable (the others got sick on the way home). I wasn't so sure anymore either why I felt so fine. Two hours later my life was saved by Kaopectate. Thinking the misery was over, I went fishing and relaxed. About an hour later, I had the same experience as the others. And then there were none.

In the five years I have been teaching about wild foods, I haven't knowingly caused anyone to get sick, so I tried my best to figure the situation out. I cross checked everyone's wild food selections and my best guess was the left over clam stew. I still don't know for certain why those of us that ate that wild lunch got so sick.

I spent three more days on the south fork with a full stomach and conducted a second class there in September, without incident. That July class, though, left a lasting impression on me and the students. Every time one of my students, Libby McCourt, sees me at a Fairfax County Park Authority nature center, she can't keep from smiling.



Kris Kamandulis earned the top prize with this Back Bay scene.

Virginia Wildlife

Photo Contest Winners
Nature Category



Second place went to Joseph C. Fallis of Richmond for this cardinal flower.

Gerald Bishop won third place with this colorful fern.



Vallie Booth of Richmond received an honorable mention for this photo of tilted mushrooms.



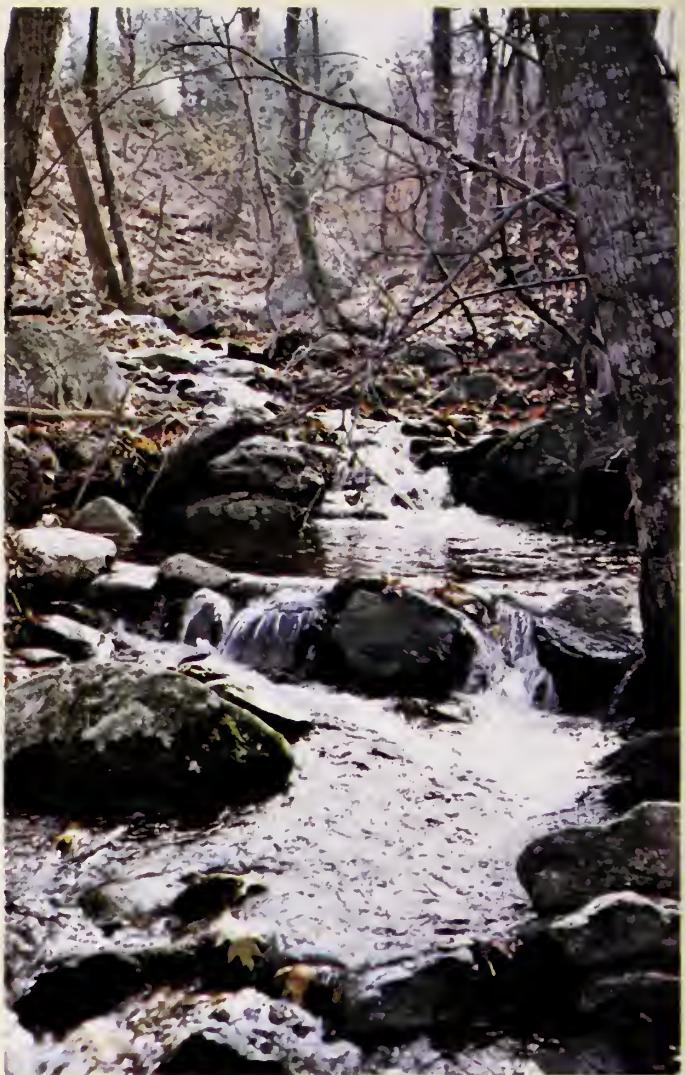
Honorable Mentions went to Elaine Kelly (above), William Fray (left) for his trillium, and to Vallie Booth (right) for her study of goats beard.



Karen Knapp of Appomattox sent this photo of autumn leaves (below)



Mike Kiernan of Marion, Indiana titles this photo (below) "James River Mist."



This photograph of a mountain stream was taken by Col. Kermit D. Reel of Charlottesville.

"Day's End" (right) was taken by Mary Spratley of Mechanicsville. Mike Kiernan won his second Honorable Mention for this moody river sunset (below).





VIRGINIA FEDERATION 12th CONSERVATION AWARDS PROGRAM

The Virginia Wildlife Federation believes that those who work so tirelessly to save and conserve America's priceless natural resources should receive public praise, recognition and appreciation. No nation has been more blessed with natural riches and beauty. No nation can remain strong, its people healthy and happy, its way of life full, rich and meaningful, without wise use, conservation and preservation of those same priceless resources. By recognizing and encouraging conservation leaders the VWF believe America's future can better be secured. **Virginia Wildlife** readers are invited to nominate their favorite conservation leaders for one of this year's conservation awards.

Sponsored by The Virginia Wildlife Federation and Sears Roebuck and Co.

CATEGORIES

Conservation Educator
Conservation Organization
Soil Conservationist
Water Conservationist

Youth Conservationist
Conservation Communicator
Conservationist of the Year
Clean Air Conservationist
Hunter Educator

Legislative Conservationist
Forest Conservationist
Wildlife Conservationist
River Conservationist

Virginia Wildlife Federation
INCORPORATED
CONSERVATION AWARDS FOR 1978
NOMINATION FORM

To make a nomination, send two (2) copies of this form and all attachments to: Conservation Awards Center, P.O. Box 744, Vienna, Va. 22180.

NOMINEE:

RECOMMENDED BY:

NAME _____

NAME _____

COMPLETE ADDRESS _____

TITLE _____

AWARD CATEGORY _____

COMPLETE ADDRESS _____

Please specify one of the eleven categories for which nomination is made. Use a separate nomination form for each award category and for each individual or group nominated.

NAME OF MEMBER CLUB _____

DATE _____

Please attach two (2) copies of a resume of achievements not to exceed two typed pages. Include organization memberships, affiliations, past achievements, past recognition, specific acts for which recommendation is based, and other references for comparison. A full documentation is needed by the judging committee.

NOTE: NOMINATIONS MUST BE POSTMARKED NO LATER THAN MIDNIGHT, AUGUST 15, 1978.

Edited by Mel White

TROUT UNLIMITED EXECUTIVE DIRECTOR APPOINTED

Dr. Keith Argow a forestry and wildlife resources professor at Virginia Polytechnic Institute and State University, has been appointed Executive Director of Trout Unlimited in Washington D.C.

Michael Owen, President of TU, an international association dedicated to the protection and enhancement of cold water fisheries in North America, made the announcement at the Denver office. Owen stated TU is very pleased to have Dr. Argow as the new Executive Director and mentioned Argow has excellent qualifications.

Born in Connecticut, Argow was raised in Oregon and received degrees in economics and forestry from Colorado College and the University of Michigan. He earned his Ph.D. in forestry and political science from North Carolina State University. He spent 12 years with the U.S. Forest Service with assignments in Virginia, North Carolina, Colorado, and Washington, D.C. He has been a member of the Virginia Tech faculty since 1974, serving as Section Leader of the Forest Recreation and Park Management Program.

Dr. Argow has a long background of public involvement in natural resource matters. He is a member of the Board of Directors of the American Forestry Association, and active with The Nature Conservancy, the National Ski Patrol System and the Society of American Foresters. He was an environmental consultant to the State of Alaska for the oil pipeline.

He and his wife Mary Lou have three children and make



their home in Blacksburg, Virginia.

Trout Unlimited, with 20,000 members and 280 chapters, is a unique national non-profit membership organization dedicated to the enhancement, preservation and restoration of the nation's cold water fishery resources.



Black Snake!

By Gay Neale

He came up to the front door of my Southside farmhouse the other morning and wandered in. The dogs set up a ruckus and I came to see. Ah, a little black racer — *Coluber Constrictor*.

"No," I said. "You can't come in here."

I got a stick from the kindling pile and made him lift up his neck so I could slide the stick under him. Such immense muscle control they have, snakes. He was able, with the few small plates touching the stick, to rotate and move his body forward.

I put him out on the concrete apron of the porch. He didn't go away, but sat there and looked at me, and I looked at him. Finally he oozed off, slid in one fluid movement down the side of the house, and after a staring match with the cat, went away through the grass. He wasn't a very big one. Not nearly so big as the black snake I found curled up in the hen's nest, his mouth stuffed so full of egg that he didn't object to my hand on him. That time, I made him give me back my egg before poking him out of the nest and down into a hole in the dirt barn floor.

I have never been a snake lover, but I'm getting used to these black snakes. They may swipe an egg now and then, but they have a sense of humor about it, swallowing them whole and then spitting out the shells in the

most unlikely places. A few eggs lost is a small price for the efficient rodent extermination service they run. Some say they run off cottonmouths, too.

Black snakes are fearless, graceful and sun-loving. Often one is stretched almost across the seldom-used road out front. I've waked them up and prodded them to the side many a time. It hurts me to see one run over.

My neighbor claims they will milk a cow. Another friend says she has seen them sleeping in her attic in the winter. At the feed store a man told me he found one asleep in his bureau drawer. He blew the bottom out of the drawer with his shotgun, while the snake wandered off.

Around here we have a symbiotic relationship and each spring in the old stone well we find skins that annually get longer and longer.

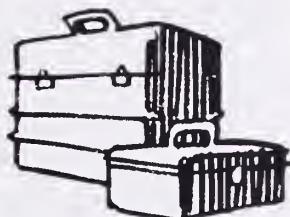
Motherly Love

I've often heard it said that a mother would give her life to save her child. I know this to be true of at least one mother.

While traveling the back woods of Wise County inspecting strip mining jobs, which is my profession, I noticed an object in the dirt road far ahead. At first it appeared to be a quail, but as I got closer I saw it was a grouse.

I quickly grabbed my camera, assuming she would fly off, and snapped a couple of pictures. However, the

TACKLE BOX TIPS

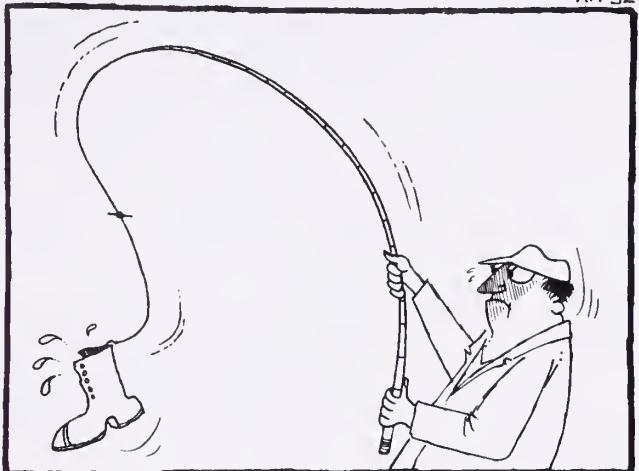


The traveling fisherman needs a go-light tackle box, an ultra-light reel and a telescoping rod. He can get by with just a plastic worm and a hook and a slip sinker for casting weight—if he's featherweight serious. And he can tuck it all into a briefcase or the briefest of lightweight aluminum tackle boxes.

Or, he can enlarge his chances with extra reels, spoons, plugs, flies, jigs, leaders, weights, assorted worms and worm-blowers, snaps and swivels. Don't forget an oversized tackle box is easily checked through as baggage on airplanes.

Courtesy UMCO Corp.

AM-92



By Denis Anderson

grouse didn't budge. Easing my vehicle closer I took another picture.

Cautiously I stepped from the vehicle and eased towards the grouse. In a flash she ran up the road, only a few feet, and stopped to watch a mortal enemy. In that same flash I caught a glimpse of movement in the weeds, directly beside the place that mother had stood. Then the whole situation fell into place. Mother was attempting to lure me, the danger, away from the young with the possibility of losing

her life.

I started searching in the weeds for a peek at a baby grouse. I became quickly frustrated though, because of their excellent camouflage. I knew they were there so I continued my search until I found this cute little fellow. He was right under my nose, but was well hidden due to mother's command.

Turning towards my vehicle, I left the family unmolested with mother still attempting to lead me away so she could get back to her babies.

LOGGERHEAD TURTLE

BY DANIEL L. JAMES

One hundred thirty-five, one hundred thirty-six, one hundred thirty-seven!" No, that's not the final tally of crappie after a successful weekend fishing excursion, nor the weight of that heart-stopping first whitetail, but the exhaustive egg-laying efforts of a giant 340-pound Loggerhead (*Caretta caretta*) sea turtle.

As the eggs of ping-pong ball size were carefully replaced in the nest cavity and all signs of human and reptile activity dutifully erased in the sand, I decimated the mosquito population by one and reflected upon the circumstances which had led me this summer night to a remote inlet on the east coast of Florida.

I work as an Interpretive Naturalist for the Fairfax County Park Authority. Reptiles, particularly those of the shelled variety, have always been a special interest of mine.

Loggerheads are one of the sea turtles that could end up on the Endangered Species List. All too often the plight of many dwindling plant and animal species progresses relatively unnoticed until the path to extinction becomes irreversible and a foregone conclusion. Even the protection afforded these species officially recognized by the U.S. Department of Interior as "endangered" may be medicine prescribed too late to save the "patient" from a lasting death.

The founders of Caretta Research, a non-profit marine turtle conservation foundation, recognized some of the early symptoms of a Loggerhead population in trouble, such as yearly decreases in the number of nesting females. They bonded together in a common cause to safeguard America's marine turtle resources. Each year since its inception in 1968, Caretta Research has established several research stations along the Gulf of Mexico and the Atlantic coast of Florida during the May-August nesting season. Studies conducted at these stations include localized on-the-beach nest counts, determination of depredation on eggs by natural predators, and tagging adult Loggerheads. Interested volunteers assist experienced unit leaders in conducting these activities and no one receives paid compensation for their time. So it was that in July, 1974, I found myself

combating heat, mosquitos, and constant rain on a remote Florida beach--thoroughly involved in the plight of the Loggerhead.

The Loggerhead turtle is distributed world wide in temperate and tropical seas, and although seldom seen today, once nested on Virginia's Eastern Shore. Second only to the enormous Leatherback sea turtle in size, the Loggerhead is known to approach 7 feet in length and weigh as much as a full-grown grizzly bear or an entire football defensive line!

The Loggerhead population is subject to a host of natural predators, with raccoons heading the list. Opossums, Coatamundis, and skunks are among those predators which excavate the nest and hungrily devour the eggs or catch hatchlings as they scurry toward the ocean. A wide spectrum of shore and predatory birds and even sand crabs may be included among the Loggerhead's enemies. Carnivorous fish collect in the shallows offshore during the nesting season to prey on the abundant hatchlings. Fortunately Mother Nature compensates for a high infant mortality in sea turtles by the sheer volume of eggs produced.

Even the small percentage of turtles which reach maturity realize little security. Frequently, they are attacked by sharks and it is not uncommon to discover a sea turtle with part of a shell gone or a flipper missing.

However, pure biological controls including natural predator-prey relationships have seldom proven fatal to an animal species. Often, they help maintain a balance in nature through constant readjustment of population levels to meet fluctuating carrying capacity limiting factors.

As is all too often the case, the present threat to the Loggerhead is the result of man's incursion on the natural habitat of this species. A mysterious drive exists within Loggerheads, and other sea turtles, which compels them to return to that same beach where they once erupted as frenzied hatchlings. Throughout its range the conversion of wild beaches to oceanside resorts, condominiums, and other types of development have contributed significantly to the decline of the Loggerhead sea turtle. The nesting instinct is frustrated by the hotels now occupying their hereditary sites. The keen eye of the female is disturbed by nearby lights and



An effort is underway to extend the nesting range of the loggerhead.

VIMS—Sea Grant Photo by Dick Cook

curiosity seekers. Confused, she returns to the sea without laying. If a satisfactory beach cannot be located, the eggs could be discharged into the salt water or absorbed into her system.

Under cover of darkness, illegal poachers abscond with entire egg clutches and, if they discover the female in the process of nesting, often butcher the helpless turtle. Eggs, meat and oil are sought in addition to a variety of artifacts made from the shell and bones such as jewelry, combs and utensils.

The combination of human abuses coupled with natural predation has imposed great pressures on Loggerhead and other sea turtles, consequently decreasing their numbers. Anxious to learn more about the status of the Loggerhead in our native state, I contacted the Manager of Chincoteague National Wildlife Refuge.

He indicated that today a thin ray of hope illuminates an otherwise bleak future for the Loggerhead in the Commonwealth. In 1969 Chincoteague National Wildlife Refuge initiated a Loggerhead transplant program in an effort to extend the present northern nesting range of the species. Each year since the program began eight to twelve nests have been removed from Cape Romain National Wildlife Refuge in South Carolina. The eggs and some original sand surrounding the egg cavity are transported to Chincoteague in Styrofoam coolers to maintain a constant temperature. The

eggs are buried on the sand dune and the clutch surrounded by a wire cage to reduce the possibility of predation and wash-out by unusually high tides.

The incubation period lasts approximately 50 days, and the hatchlings require another 4 days of struggling to escape their sandy nest. As they emerge, the youngsters are carried to the surf to be released, thus reducing the predation from terrestrial and aerial fauna.

The first indication that the project may prove successful occurred July 21, 1974, when a female returned and deposited 115 eggs just .6 mile from the original nest site.

Like the Chincoteague project, Caretta Research's activities represent positive action to insure the survival of the Loggerhead species. The two weeks I spent with them was a most rewarding experience, professionally and personally.

Isolated on a dark and lonely dune at 3 A.M., one cannot help but embrace a deep sense of living history as a prehistoric female Loggerhead plods deliberately up the beach. It is here on this sand where she herself once hatched and scrambled into the sea, that she comes to reenact the ancient egg-laying ritual, for perhaps the billionth time.

Out of Step Odyssey



What could possibly happen on a trip through the lower Chesapeake Bay on a 41 foot yacht?

BY SHARON HIGGINS

Forty-one feet? Super!" I cry. "When do we leave?" To a co-owner of a daysailor with headroom only from on your knees, a call to move a 41 foot yacht through the lower Chesapeake Bay sounds like a dream.

Some friends need help relocating an acquaintance's new purchase from Elizabeth City, N. C. to Annapolis. The owner's delighted to get a free crew and we're happy to go!

So far, an overnight on our 19 foot sailboat is the extent of our cruising experience. This either makes for close friends or "irreconcilable differences!"

Togetherness is great, but try dressing for dinner in 100 degrees summer heat while on your knees...or, consider the cosy toilet facilities that give everyone on deck a sense of participation. Early on, our family learned loud (if not close) harmony on a variety of simple ditties ("Row, Row, Row Your Boat" being a favorite) to give the head occupants a semblance of privacy.

"Imagine having two enclosed heads--one with

shower," we tell each other. "And two staterooms and a big lounge!" Our friends aren't any more composed about the yacht as they also have only a daysailor.

On Friday evening, we rent a car and pack our three, their three (one dog), food for the trip and minimal clothing. It's a long drive and approaching 11 p.m. when we finally drive up to the pier.

The yacht looms white and blue like an ocean liner out of the darkness. Fatigue vanishes as we eagerly board and open up the forward cabin.

Hmm.m.m.mm. Smells funny in here.

Not wanting to dampen spirits, we each keep the olfactory evidence to ourselves.

My daughter runs to the much-touted heads first.

"Oh guck!" she exclaims, "They didn't clean up ANYTHING." The previous owners obviously hadn't been big on housekeeping.

My friend and I open up the large icebox and UGH! No cleaning here, either.

By 1:00 a.m. things are looking up and smelling a lot better, so a very tired crew climbs into their berths.

The day dawns bright and beautiful. We aren't going to make the early start we had planned, but we can start out and cook breakfast underway. We're eager to leave.

We are...but the yacht isn't. The engine turns over but as soon as our attention turns to things like casting off dock lines, it quits.

One and one half hours later, success! The missing connection is found. Let's get it on, group!

Nope, this time it's the electric bilge pump. Being a luxury craft, it has an electric one to ease the strain of hand pumping. The consensus is to forget electricity and use the standby manual one.

"Oh. It's plugged." As it turns out two hours later...with a champagne cork.

During the second delay, my daughter and I swim off the dock. It turns out to be one of those delightful intervals that boating can offer.

After checking with the dock owners on water cleanliness (a necessity anymore), we jump in with the local kids. It's remarkable water the color of iced tea--dark, clear with a faintly acidic taste and none of the familiar salty flavor of the bay. My daughter disappears completely a few inches under the surface. My enjoyment of the swim is somewhat impaired by my frantic efforts to find her--when she bobs up 10 feet away!

Local folklore says the color is from the roots of plants in the nearby Dismal Swamp. Whatever it is, its remarkable!



Finally, all repairs done, we start. We had all collaborated on our proposed itinerary up the bay and hope to visit the places out of reach in our small boats.

The first stop was to be Newport News on the other side of the swamp, by way of the Inland Waterway.

It rains continuously. It is appropriately Dismal.

Small boat sailors are usually hardy, though, and we find going through the locks fascinating. Like a giant bathtub--and you're on your favorite toy as the water rushes in.

Since it's the 4th of July, I've stowed away a small supply of fireworks (red, blue and white sparklers) which we set off at dusk.

The next morning, we encounter our first bridge as we emerge from the canal into Portsmouth, Virginia waters. They had not been included in our previous experiences with boats. And the score is about to become Bridge 6; boat 0.

Having read the waterway guide on the proper number of horn blasts, we approach confidently and at a smart speed. Smart maybe, but not intelligent. The bridge operator knows novices when he hears them.

No action on the bridge, but there's a lot of scurrying around frantic re-reading of the guide on the boat.

Finally in desperation, my blond friend goes into a kind of free-form "riff" on our horn--and majestically the bridge rises.

Completely disconcerted by the delay and the exotic horn work, the captain backs over the dingy painter (rope).

Wang..wang..rumph. All forward motion stops and the engine is hastily shut off. Our dingy is closer to our stern than a newborn calf to its mother.

"Drop the anchor, *+†!* it," points out the captain as we slide helplessly through boat traffic toward the bridge. Visions of a topless yacht dance before my eyes!

"THROW THE ANCHOR--Throw the anchor! Ah.h.h.h.. But now there's no escape from going over the side to release the dinghy painter from the propeller blades.

The harbor water is probably not the worst I've seen, but even so, strange colors, shapes and smells swirl by, accompanied with swarms of sadistic sea nettles. Two less eager swimmers than the men could hardly be imagined or two more apprehensive wives as with each dive the men disappear from sight. Maybe they've dissolved?

Two hours later and incredibly behind schedule, we pull into Chesapeake Bay. Glorious sunshine! Up go the sails. No wind. Down go the sails. We motor.

By 7:00 p.m., we're very low on fuel and decide to stop at Cape Charles...besides we're starving and tired.

A trip such as this offers fun, as well as good, hard work.

At a gas dock catering mostly to commercial fishermen, we tie up and refuel. We're a little self-conscious about our size and the small amount of fuel we're buying while taking up all the space. But we'll be quick about it, we rationalize.

The engine starts but we aren't moving. How could this be? Over the side again. We discovered the propeller to be hanging on by about two short turns before it slides into Cape Charles mud forever.

Explaining our predicament to the attendant, he responds "it ain't no problem of mi-yan," but allows as how he will let the owner know of his unwilling guests.

We can't move tonight, but staying by the gas pump means no cooking aboard. So, it's the ladies turn for unpleasant duty.

Load up all the food, utensils (including the stove) and trot up the hill into the total blackness. We don't realize that we aren't just to fix dinner but that we're also going to be dinner for around 30 thousand, hungry country mosquitoes that don't know how to spell bug repellent.

At 4:30 a.m., with the surprisingly good-natured help of commercial fishermen who can't get near the gas dock, we solve our propeller problem.

With a solid four hours sleep, we sail (finally) all day and into the evening until the chart tells us of an interesting marina on the western shore (with seven feet in the channel, plenty for our five foot draft).

It's a glorious, cool evening with the scent of pines from the shore. The area is a bird sanctuary and I'm planted on the bow with my binoculars, yelling "there goes a crane!" and "did you see that osprey?"

Everyone else is watching the rock breakwaters on either side of the very narrow channel. The tide is strong for the bay and we have a fast ride in until we slide to a dead halt for the first of our seven groundings.

The flat-bottomed fishing and crabbing boats look on with amusement as we first try to back off with the powerful (if freaky) diesel--then kidge off with the dinghy. This involves loading an anchor and stalwart crew member on the tippy dinghy and rowing in the direction you'd like to go: dropping over the anchor; setting it and with the line secured to a winch aboard the yacht--pulling the yacht off.

It's a nerve-wracking business, especially seven times. The people

running the Marina are friendly but aren't overly concerned that their channel seems to be filling in.

After lengthy discussions, we discover that the next high tide occurs at 3:00 a.m. and we'd better be on it.

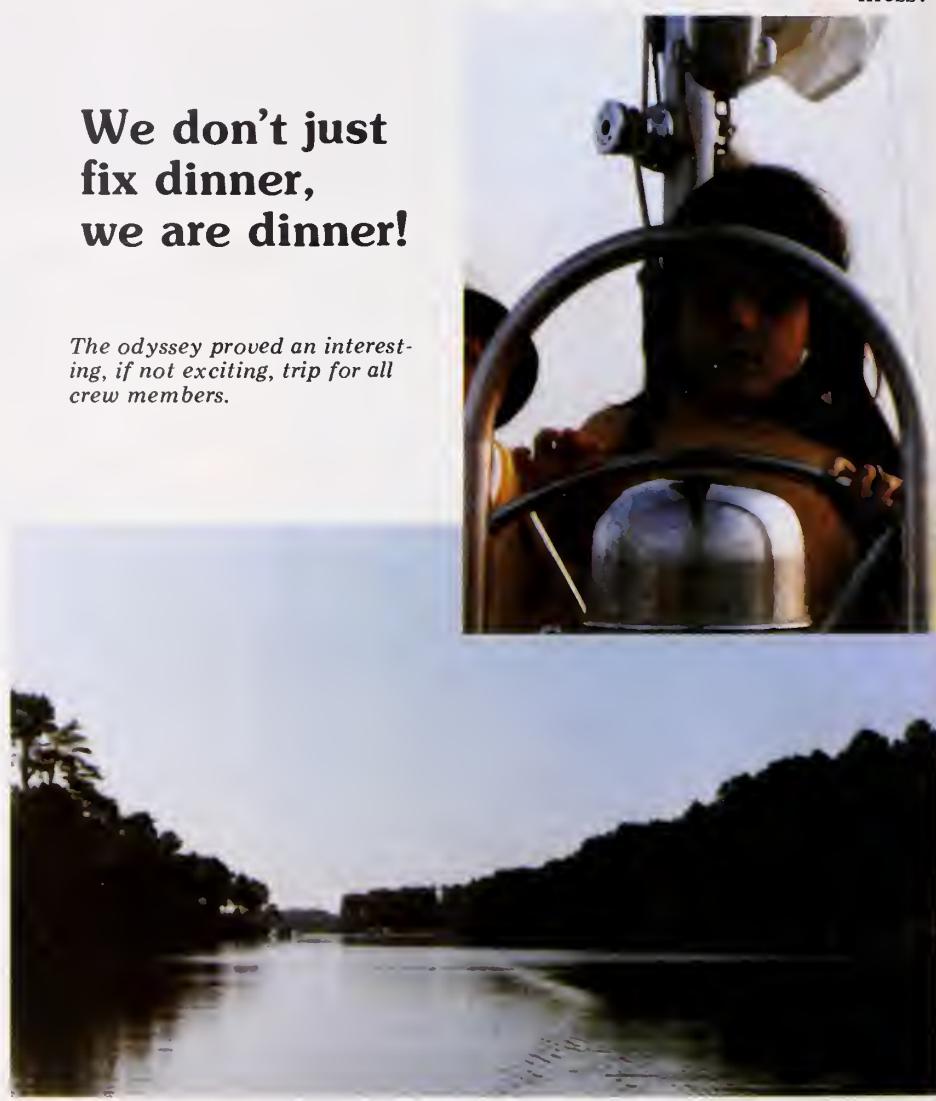
No one remembers what they ate that night or going to bed. When I'm awakened in the wee dawn hours, not only don't I know where I am, I can't even remember who!

Exhaustion, stress and no breakfast have their evil way with me, and we're underway only a little time when I have to resort to sea-sickness pills. I certainly don't know what those pills do to most people, but to me, it's like a temporary lobotomy. I become your friendly local idiot--harmless, but hopeless and no help at all.

The whole last day enroute to the Solomon Islands (where we finally leave the boat) is a daze. We have to get back to our jobs, our simple daysailing and our small but uncomplicated boats. And we are so grateful. As a result of our odyssey through the bay, we're ready to paraphrase Aesop's famous line and proclaim that "A small boat in good hands is worth two heads in a mess!"

We don't just fix dinner, we are dinner!

The odyssey proved an interesting, if not exciting, trip for all crew members.



On The Waterfront

Edited by Jim Kerrick

THE SKIPPER IS A MS.

It's finally happened!

Those days of the man of the house telling his wife he was going to spend the day fishing offshore with the guys are over.

Women's liberation has invaded boating, which acknowledges that it's about time.

It used to be the domesticated women of yesterday just didn't like the idea of going boating. "It makes me seasick. You go," she would moan. After a while, the invitations stopped. Lo and behold, all of a sudden, she doesn't need any Dramamine anymore and is an expert sailor.

The role of the galley slave is over, kaput! Just like her new expanded responsibilities in the office, the liberated woman has new status onboard.

What's surprising to many graybeards, the fairer sex is doing a better job than many of her male counterparts. In some areas, like physical strength, she may be lacking. But, in others, she is uncanny in her abilities.

It's not unusual today to see a woman piloting a boat, navigating in tough waters, racing along in a regatta. What about the galley? Much to many men's surprise, they are being fed, too. Indispensable in the home, a woman is becoming a necessity aboard.

Since she's no longer sweating over a hot kerosene stove, her new position is very diversified. Maybe it's women's intuition, or maybe the potential was always there, but man moved over.

She speaks the language of the water, knows the rules of the road, can plot and read waterway charts and tie good knots.

Take the weather, for instance. Women have an instinct for it. You can't explain it, they just do. When she says, "It's going to rain" and her skipper counters with, "Oh, how do you know? There's not a cloud in the sky." "It just is," is usually followed by a shower.

Women, of course, have easily assumed the natural role of ship's hostess. As officer of protocol, it's her duty to suggest to guests what to wear, insuring lifejackets are provided, finding out if they can swim, and assigning them lockers.

Men have a tendency to lose things and women don't. It's a fact. The female species is very good at keeping an inventory.

How many times have you heard the story of a woman friend who was invited on a boat ride and arrived at the dock in a dress and high heels? Happen to you, maybe?

It took awhile, but women finally learned that a boat is nowhere to show off their wardrobes. It was a

struggle, but common sense prevailed.

Now it's hard for the men to find out where the waist is and whatever happened to the hips! It's "wear clothes as old as you can find." Well, at least they still say they bought it at "Pierre's" during an exclusive sale. So, what if that was ten years ago!

The fashion world has entered the boating business with practical and colorful apparel, turning boating into a beautiful blend of reds, blues, whites, oranges, yellows, and pinks.

Boating is a festival of colors. With a pretty girl as first mate — even taking over the controls now and then — boating has added a new dimension to a male's social life.

The bitter triangle of man, his woman, and his boat is a chapter in history. It's resorted back to an old American love affair.

You've got to admit, it's a nice story.

Boating Tips . . .



SALTY LINGO

The tangy vocabulary of sailors has found its way into the common language of landlubbers. Plenty of obvious examples have been heard by the MerCruiser stern drive seafarers. You have already been told to "pipe down" or to "take a new tack" when planning a course of action. "Sailing under false colors" is self-explanatory. When a man says he is "swamped" with work, you know he's quite busy. But when a sailor says that he is swamped, he is literally "up to his neck" in trouble. "Take your bearings" is good advice for seamen and non-sailors alike. We all talk about "manning the helm" or "taking the wheel," but only sailors actually do so. "Keep your head in the wind" is heard on land and sea. To a sailor "the bitter end" means the extreme end of a line, although others refer to it as last stand in a tough struggle. And "stow it" and "cut of the jib" certainly originated with the men of the sea.

Personalities

Text and Photo by Francis N. Satterlee

Karl Martin's father was a career military man which enabled the youngster to travel extensively. He was born in St. John's, Newfoundland, attended both first and second grades in Giessen, Germany, lived in communities adjacent to Fort Eustis and Fort Lee, Virginia, started high school in Prince George County, Virginia and graduated from Franklin County's Virginia High.

When he was quite small and the family was overseas, Karl's father began teaching the boy about the outdoors and hunting and fishing, and the two fished together frequently. Returning to the United States, father and son continued to fish and Karl began to hunt more extensively and his "good feeling" about the outdoors intensified.

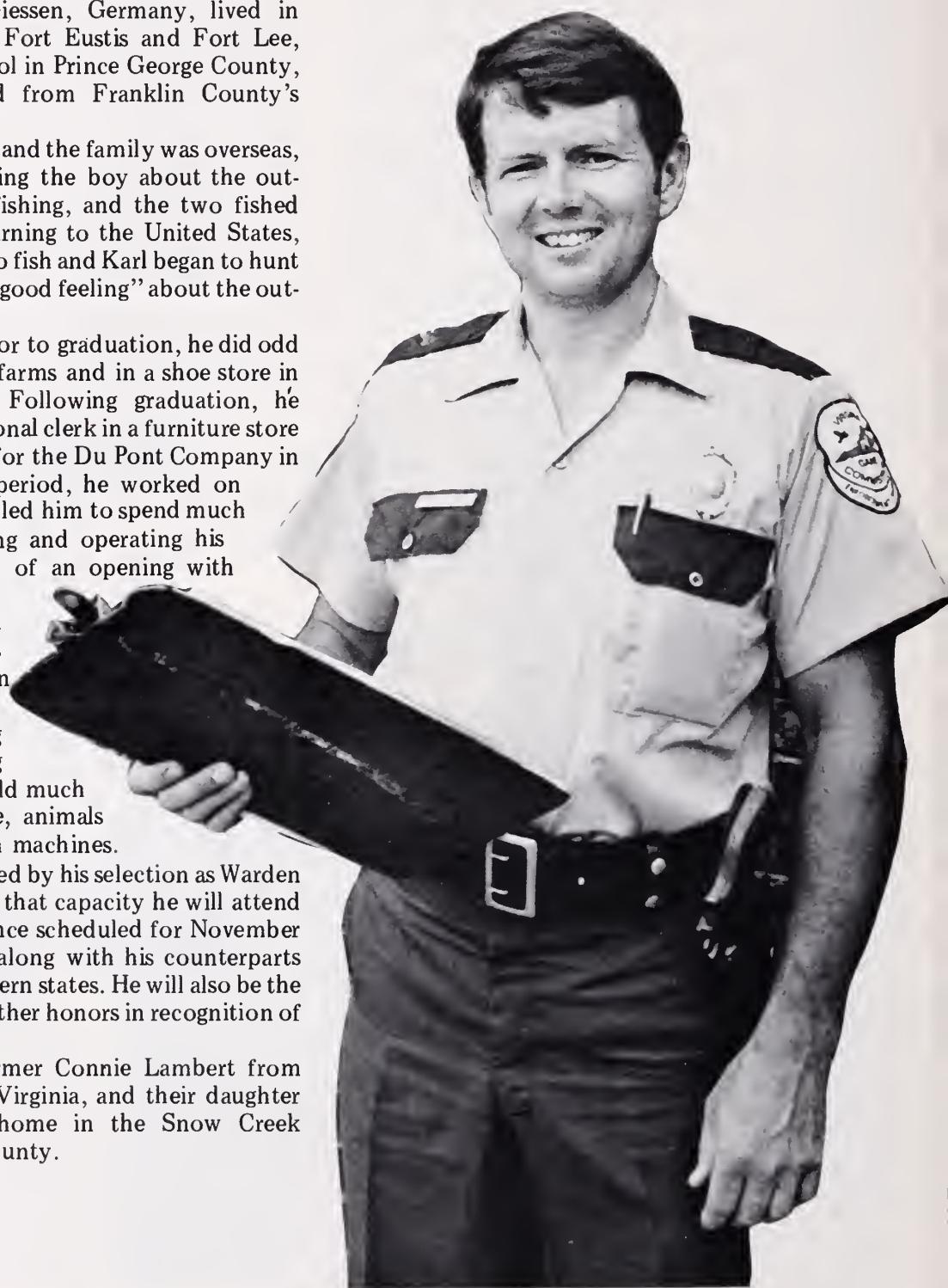
During the summers prior to graduation, he did odd jobs, worked on tobacco farms and in a shoe store in Martinsville, Virginia. Following graduation, he worked for a time as a personal clerk in a furniture store and then, for eight years, for the Du Pont Company in Martinsville. During this period, he worked on shift schedule which enabled him to spend much time afield hunting, fishing and operating his boat. In 1971 he learned of an opening with the Game Commission, applied and was accepted and in January 1972 was assigned to duty in Franklin County, Virginia.

This fulfilled a lifelong ambition, for he had long since decided that he would much prefer to work with people, animals and things wild than with machines.

Martin was recently honored by his selection as Warden of The Year for 1978. In that capacity he will attend the Southeastern Conference scheduled for November in Hot Springs, Virginia along with his counterparts from the sixteen southeastern states. He will also be the recipient of a number of other honors in recognition of his achievement.

Karl, his wife, the former Connie Lambert from McDowell County, West Virginia, and their daughter Kimberly make their home in the Snow Creek community of Franklin County.

Karl P. Martin
Warden of the Year 1978



Growing Up Outdoors

By Sandy Coleman

SNAKES!

"Matt!"

Matt looked up and saw Amy with Rover at her heels, racing across the meadow to the shade tree where he was sitting. He put down his library copy of *Treasure Island* and forced his attention onto his upset little sister.

"What's the matter? You look really frightened. Are you all right?" Amy breathed heavily and with eyes as wide as saucers, she began to tell Matt about what had frightened her.

"I saw a snake. It was as big around as that tree!" she said pointing to the oak tree. "It chased me and then when I stopped to look at it, it just stared at me. Then I ran again." She paused to take a breath and said dramatically: "I could have died from the poison just like on that television show the other night!"

"What did the snake look like?"

"It was big," Amy answered.

"No, I mean what color was it and did it have any markings?"

Matt watched as his little sister sank down beside him on the cool, green grass.

"Well, it was big and black and mean looking! It was just awful." Amy shivered at the memory.

"Amy, that was just a black snake. He won't hurt you unless you frighten him very badly, and then he will only bite. He's not poisonous! And I don't think he chased you."

"Well, maybe he didn't," Amy admitted shamefacedly. "I thought all snakes could hurt you. Are you sure?" Amy's doubt was evident in her voice.

"Yes, I'm very sure. I read a book about snakes in Virginia a few months ago. There are only



Illustration by Diane Grant

four species of poisonous snakes that live in Virginia, although there are a lot more kinds of snakes here. Why don't we try to find out more about snakes. Then, maybe, you won't be so frightened."

Amy agreed enthusiastically and Matt gathered up his books, woke up the sleeping kitten, Rover, and the three trudged home.

The next day found the brother and sister (and their kitten) grouped around the oak tree looking at the colorful pictures of the snakes found in the United States, and, particularly, Virginia.

"Well," said Amy. "I know now that I was really silly to be so scared of that snake yesterday."

"That's right, you should just let the snake alone and try to let him go about his business. If you see a snake that you think is a poisonous one, just try to get away as calmly as possible. You should move very slowly and cautiously."

"It seems strange that if we have 36 species of snakes in Virginia, only four are poisonous. Can you

name them, Matt?" Amy challenged.

"The copperhead, the cotton-mouth, the timber rattlesnake, and the canebrake rattlesnake. They are all pit vipers and that means they have heat sensing pits on the mid-point between the eye and the nostril on each side of the head. A good rule to remember is that you should avoid snakes with a wide body and a triangular head. It doesn't mean that they are all poisonous, but it is a good standard. A lot of snakes look just like poisonous ones, but are harmless themselves, like the Eastern scarlet snake that looks just like the coral snake found in Florida. The coral snake is very poisonous," Matt said knowledgeably.

"Snakes help us, too. It says here that snakes kill rats and that any farmer will be grateful to have a black snake or two around his barn. That's the snake that I was frightened of yesterday! I sure was silly, wasn't I?"

Matt, afraid to answer Amy's question, contented himself with watching Rover settle down comfortably in the soft grass.

AUTOMATIC WEATHER BROADCASTING BEGINS IN RICHMOND AREA

Mr. Hurtis Smith, Meteorologist in charge of the National Weather Service Facility at Byrd Airport in Sandston, Virginia recounted recently that continuous radio broadcasting of weather conditions became a reality on a test basis on May 9, 1978. A short time later, following the "break-in" period, the service was Commissioned and became fully operational.

The broadcasts originate from the weather station at Byrd Field, flow through telephone lines to the State Highway Patrol Headquarters area on Route 360 in South Richmond and are broadcast from an antenna mounted on a tower in that vicinity. Broadcasts are FM at a frequency of 162.475 megahertz.

Featured in the new service is the continuous transmission of weather conditions existent in the area with-

in 40 miles of Richmond. Additionally the broadcast will describe the Richmond area forecast, State forecast, the extended 3 to 5 day outlook and the forecast for the Chesapeake Bay. Hurtis said that, "these broadcasts of approximately five minutes in length will be updated every six hours. An exception to this would be in the event of a sudden change to the weather or the development of severe weather conditions, at which time the broadcast would be updated as often as the situation warranted."

Severe weather conditions which are common during the summer months are being given special attention by the new service. The broadcasts will describe any severe weather *watch* throughout the state. However, transmissions pertaining to the immediate Richmond area

will also include announcements of *weather-warning* conditions and statements concerning the development of the storm or other phenomenon.

Listeners interested in receiving these broadcasts must have equipment capable of receiving the FM frequency 162.475. Receivers of this type are readily available in either the regular models or in the portable configuration. Hurtis stated that, "he thought this new service would be especially valuable to sportsmen, hunters or fishermen and, of course, to boaters. We are now able to warn the public of potential dangers and hopefully save lives and property with our new service," he said.

One of the interesting features of the broadcasts is the use of a special warning tone or tone alert which will be transmitted as a preface to the warnings about severe thunderstorms or tornadoes. The tone not only is audible to anyone tuned to the frequency but it has the capability of automatically "turning on" the more expensive or complex types of receivers, thereby alerting the owners of impending weather problems.

When the Byrd Field station became operational it brought to three the number of such stations operating in the Commonwealth. One station broadcasts from Norfolk and the other from Manassas, Virginia. Both of these stations operate on FM at a frequency of 162.55 megahertz. Two additional stations are planned for locations in southwest Virginia sometime in the future.



By Francis N. Satterlee

THE FRANKLIN TREE

"In Natures Garden"

Gone from the wild.

BY ELIZABETH MURRAY

In 1765 it must have been rugged and difficult to explore the swampy forests along the Altamaha River in southern Georgia. But John Bartram, stonemason, ardent naturalist and eccentric Quaker, from Philadelphia, was a persevering and intrepid traveler. He went by boat from Philadelphia to Charleston, South Carolina and then on by horse. He rode first to the Cape Fear River in North Carolina where he was joined by his twenty-six year old son, William. Together, father and son journeyed down to Florida, either staying with local farmers and Indians, or else camping out on their own. It was while they were trying to find a place to ferry across the Altamaha River (which was in flood), that they discovered an attractive small tree which belongs in the Theaceae or tea family. They did not collect it at that time, since they felt that cuttings would not survive their long travels, and the plant was not producing seed, but they took careful note of the location. In 1773, William returned to the spot, described and painted a watercolor of the tree, named it *Franklinia* after the family friend, Benjamin Franklin, and collected seeds which he brought back to be grown in his father's gardens on the Schuylkill River just outside Philadelphia. The Franklin tree was sighted again early in the nineteenth century, but since that time, it has never again been seen in the wild. All the specimens living today came from the original stocks which William Bartram brought back. If it had not been for his careful collecting, we should never have known of this plant.

If the Franklin tree had become extinct in the eighteenth century, the loss would have been ours, for it is an elegant and beautiful plant. The family Theaceae also includes the tea plant and all the camellias. In Virginia the family is represented by two species of *Stewartia*, the rare mountain camellias, while further south, there is the loblolly bay, *Gordonia*, in which genus the Franklin tree is usually included nowadays. All members of the family are shrubs or small trees with showy flowers and simple, shiny, alternate leaves devoid of stipules. Flower parts are arranged in fives and the fruit is a woody, five-part capsule.

It is too clinical just to list 'showy flowers' along with the other characteristics of this family, and anyone who has had anything to do with the color range and flower shape of camellias will agree that it is a gross understatement. And the originally wild Franklin tree certainly does not let the side down. Unlike most flowering trees, it blooms relatively late in the year. The buds are fattening all through the spring and early summer, finally opening up sometime in August. The



Illustrated by Lucile Walton

flowers are at least three inches across, a waxy cream color with brilliant yellow stamens. The woody capsule persists on the branch until late fall, eventually opening with a curious zig-zag split around the tip to shed the seeds.

The Franklin tree may grow to about thirty feet in height. Until quite recently, there was a particularly fine tree in the Bartram gardens in Philadelphia, descended from William Bartram's original collections. The Bartrams' land on the Schuylkill River is now preserved as a city park. There is a Franklin tree growing on the grave of Benjamin Franklin in the Christ Church burial ground, also in Philadelphia. Franklin tree seeds will germinate quite readily but may be capricious about their future requirements. They do not always thrive in what might appear to be optimal conditions. They do seem to like a warm, sheltered spot, as might be expected from their Georgia origins, but they can clearly also stand much harsher winters than they would ever encounter along the Altamaha River.

There is a fine stand of Franklin trees at Blandy Farm, the arboretum in the northern part of the state belonging to the University of Virginia. The University itself has one specimen in Charlottesville, presented by the Arnold Arboretum of Boston in 1972, as part of their centenary celebrations. Our tree stands outside the Biology Department at Gilmer Hall on McCormick Road and is growing extremely well. There is also a Franklin tree in the grounds of Maymont, the ornate Victorian house in Richmond, built by the Dooleys and recently re-opened to the public. The tree is fifteen feet high and blooms profusely each year.

Audubon painted the Franklin tree. The original watercolor by William Bartram is in the Fothergill Album at the British Museum in London. In 1968, the American Philosophical Society (of which John Bartram was one of the founder members) published a volume which included reproductions of all the pictures Bartram painted for Dr. Fothergill, with *Franklinia alatamaha* as the frontispiece. The illustration here has been drawn from our own local specimens. While admiring it, we can all speculate about whether the Franklin tree will ever again be found in the wild.



JOHN W TAYLOR

Bird of the Month

The American Goldfinch

By John W. Taylor

British country folk once called a flock of goldfinches a "charm." The term was not used as it is in modern times, but rather stood for the "intermingling of many small voices, blended as one." It is certainly one of the loveliest, most descriptive of those Old English collective nouns.

The American goldfinch, though quite different from the European species, has the same delightful tendency to sing as a flock. Inspired to song by the first warm days of spring, bands of roving goldfinches break into outpourings of bubbly, canary-like melody. If there are enough birds, the whole neighborhood is drenched with the flood of their sweet, happy music. Often, only two or three birds sing together, the effect then being a sort of lazy, pleasant reverie.

Early spring is the usual time for these communal songfests, even though the birds continue to roam about in groups through May and June. Most birds have paired off and started nesting by then and many have young on the wing. But not the goldfinch. No thought is given to any domestic activity until August or late July, at the earliest.

One theory given to explain the delay is that the later nesting period coincides with the ripening of the thistle, upon which the goldfinch relies for both food and building material. Nests are lined in many instances with layers of thistle down and the tiny seeds become a favored food as soon as they are ripe.

Goldfinches are not at all choosy in their selection of a nest site. They may build in a pasture, a shrub, in the crotch of a riverside sapling, or even 20-30 feet high in a woodland oak or maple.

The nest reflects the grace and charm of its builder. Delicate, almost exquisite, it is woven of silvery plant fibers, bits of bark and leaves, and lined with plant down (often thistle-down). So firmly and compactly is its construction that it will hold rainwater (sometimes drowning youngsters in unsheltered nest).

Thistle seed is, of course, not the only food given the nestlings. Seeds of other plants and a variety of animal matter is on the menu as well. The parent bird fills its crop, then feeds the whole family once, regurgitating the softened seeds and half-digested insects.

AUGUST, 1978

When the youngsters are grown and feeding on their own, the family tends to keep together a group. They remain as a unit even into the first chilly days of autumn. By then the adults have exchanged their bright summer garb for sombre olive greens and browns and look not unlike their offspring. The male keeps the dark wings and sunny yellow shoulders; the female retains but a touch of yellow. The darker, browner birds of the year are distinctive.

By the time of the first frost, families have banded into flocks, preparatory to moving to other parts. For goldfinches are migratory, despite their year round presence in most of their range. One bird, banded in Maryland on October 12, was recovered in South Carolina the following February. Another, banded in Maryland in April, was recovered the following August in Quebec.

These records would indicate considerable movement by at least some birds in the mid-Atlantic states. Dr. Murray, however, states in his *Check-list of The Birds of Virginia*, that our local goldfinches are permanent residents. He does note that they are more common in the eastern part of the State during the winter months.

It is probable that more goldfinches are wintering farther north now that commercially produced thistle seed is available. So fond are they of this seed that gatherings of over 100 birds have been noted at some feeders.

By mid-March, the males begin to show patches of bright yellow and in a month's time have attained the full breeding plumage. The spring attire of the female does not differ much from her winter plumage, but the colors are fresher looking, more intense.

In this plumage, the goldfinch would be hard to mis-identify. The black cap and wings of the male separate it at once from the yellow warbler, our only other predominantly yellow bird. The female, though less colorful, is distinctively without a streaking; two similar finches, the siskin and the redpoll have prominent streaking.

A scenic waterfall cascades down a rocky cliff into a pool of water, surrounded by dense green foliage and trees.

The beauty of Virginia is in your hands.
Please don't litter.



Virginia Division of
Litter Control